

## Message Text

UNCLASSIFIED

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ACTION OES-07

INFO OCT-01 EA-12 ISO-00 EPAE-00 SOE-02 CCO-00 PASO-00  
/022 W

-----097196 210527Z /13

R 200813Z APR 78  
FM AMEMBASSY TOKYO  
TO SECSTATE WASHDC 7259  
DOE GERMANTOWN MD  
DOE WASHDC

UNCLAS TOKYO 06963

TO: WILLIAM G. YEICH, UTILITY COMBUSTION SYSTEMS  
- THE MITRE CORP.  
- 1820 DOLLEY MADISON BLVD., MCLEAN, VA 22101

DOE FOR BIONDO

E.O. 11652: N/A  
TAGS: TECH, JA  
SUBJECT: ATMOSPHERIC FLUIDIZED BED COMBUSTION (AFBC)

REF: (A) APRIL 18 TELECON HENoch-BIONDO; (B) APRIL 13 TLX  
YEICH TO HENoch

1. IN RESPONSE TO REFS A AND B, FOLLOWING INFO OBTAINED FROM  
PROF. ANDO, CHUO UNIVERSITY:

A. MITI STARTING FEASIBILITY STUDIES ON AFBC JOINTLY WITH INDUSTRY.  
JFY 1978 BUDGET ABOUT \$250,000. ALLOCATION TO INDUSTRY UNDECIDED.  
UNTIL JFY 1977, NO GOVERNMENT FUNDS ALLOCATED TO AFBC R&D IN  
INDUSTRY.

B. MITI TENTATIVE REPEAT TENTATIVE ADMINISTRATIVE GUIDELINES FOR  
AFBC DEVELOPMENT CALLS FOR 1.5 MWE PILOT PLANT FOR COMPLETION IN  
1979-1981, 30 MWE DEMONSTRATION PLANT IN 1981-1983, 100 MWE PROTO-  
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TYPE PLANT IN 1984.

C. NAGOYA INSTITUTE OF TECHNOLOGY PLANS SMALL BENCH-SCALE TEST;  
CURRENTLY APPLYING FOR EDUCATION MINISTRY FUNDING.

D. TOKYO UNIVERSITY CONDUCTING EDUCATION MINISTRY FINANCED BENCH-  
SCALE TEST WITH COMBUSTION TUBE 50MM IN DIAMETER, 60 TO 600 GRAMS

OF COAL PER HOUR IN CAPACITY, TO STUDY LOW NITROGENOXIDE COMBUSTION. NO PLANS YET TO USE LIMESTONE OR SIMILAR MATERIAL FOR SULFUR REMOVAL. STUDIES ON SO<sub>2</sub> REMOVAL WITH SUCH MATERIAL UNDER CONSIDERATION.

E. MHI STUDYING FLUIDIZED COMBUSTION FOR COAL GASIFICATION.

F. BABCOCK HITACHI CONDUCTING BENCH-SCALE TEST WITH FURNACE OF 100 KILOGRAMS OF COAL PER HOUR CAPACITY. JAPANESE COAL SUCH AS MIKE COAL (S 2.5 PERCENT) AND TAIHEIYO COAL (S 0.3 PERCENT) HAVE BEEN USED. ABOUT 90 PERCENT OF SO<sub>2</sub> WAS REMOVED BY LIMESTONE. PLANS INCLUDE USE OF SYNTHETIC ABSORBENT SEPARATED FROM FLY ASH. TWO-STAGE COMBUSTION APPLIED TO REDUCE NITROGEN OXIDE TO 150 PPM.

G. KAWASAKI HEAVY INDUSTRIES USING TEST BED OF 60 KILOGRAMS OF COAL PER HR CAPACITY. ABOUT 90 PERCENT OF SO<sub>2</sub> WAS REMOVED BY DOLOMITE.

H. BABCOCK HITACHI AND KAWASAKI INDICATED INTENTION TO DEVELOP TECHNOLOGIES OF THEIR OWN.

I. MITSUI SHIPBUILDING AND ENGINEERING COMPANY PLANS COAL FLUIDIZED COMBUSTION TEST, BUT SOLELY FOR APPLICATION TO SHIP PROPULSION.

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2. MITI INDICATED INCREASE IN BOILER EFFICIENCY, CAPABILITY TO HANDLE DIVERSIFIED KINDS OF COAL AND REMOVAL OF SO<sub>2</sub> ARE IMPORTANT AIMS OF AFBC PROGRAM IN JAPAN. ALSO INDICATED THAT DEVELOPMENT GUIDELINE IS ONLY TENTATIVE AND NOTHING SPECIFIC HAS BEEN DECIDED YET.

3. PER DIRECTION BIONDO, EMBASSY TOLD ANDO TO CHARGE TIME AND COSTS TO DOE OR EPA CONTRACT. PRESENT UNDERSTANDING IS ANDO PLANNING TO BILL EMBASSY. IF SO, WILL NEED CHARGE NUMBER TO PROVIDE TO BUDGET AND FISCAL FOR PAYMENT. MANSFIELD

NOTE BY OC/T; PASSED ABOVE ADDEE.

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NNN

## Message Attributes

**Automatic Decaptioning:** X  
**Capture Date:** 01 jan 1994  
**Channel Indicators:** n/a  
**Current Classification:** UNCLASSIFIED  
**Concepts:** FUND ALLOTMENT, BUDGETS, STUDIES, PROPULSION SYSTEMS  
**Control Number:** n/a  
**Copy:** SINGLE  
**Draft Date:** 20 apr 1978  
**Decaption Date:** 01 jan 1960  
**Decaption Note:**  
**Disposition Action:** n/a  
**Disposition Approved on Date:**  
**Disposition Case Number:** n/a  
**Disposition Comment:**  
**Disposition Date:** 01 jan 1960  
**Disposition Event:**  
**Disposition History:** n/a  
**Disposition Reason:**  
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**Document Number:** 1978TOKYO06963  
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**Drafter:** n/a  
**Enclosure:** n/a  
**Executive Order:** N/A  
**Errors:** N/A  
**Expiration:**  
**Film Number:** D780170-0640  
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**Office:** ACTION OES  
**Original Classification:** UNCLASSIFIED  
**Original Handling Restrictions:** n/a  
**Original Previous Classification:** n/a  
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**Page Count:** 2  
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**Review Content Flags:**  
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**Review Media Identifier:**  
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**Review Release Event:** n/a  
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**Review Withdrawn Fields:** n/a  
**SAS ID:** 2899455  
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**Status:** NATIVE  
**Subject:** ATMOSPHERIC FLUIDIZED BED COMBUSTION (AFBC)  
**TAGS:** TECH, JA, US  
**To:** STATE DOE  
**Type:** TE  
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**Review Markings:**  
Sheryl P. Walter  
Declassified/Released  
US Department of State  
EO Systematic Review  
20 Mar 2014  
**Markings:** Sheryl P. Walter Declassified/Released US Department of State EO Systematic Review 20 Mar 2014